



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,567	05/15/2001	Alan V. McCree	TI-29772	1528
23494	7590	01/11/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			OPSASNICK, MICHAEL N	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/855,567

Applicant(s)

MCCREE, ALAN V.

Examiner

Michael N. Opsasnick

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant is advised that new relevant art, published between the Non-Final Office Action date of 4/28/05 and the filing date of the Appeal Brief, 10/24/05, has been found (in particular, US Patent 6925116). Therefore, prosecution on the merits has been reopened.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al (6675144) in view of Liljeryd et al (6925116).

As per claims 1,3, Tucker et al (6675144) teaches a method and apparatus of wideband speech encoding (abstract, fig. 1) comprising:

“partitioning...highband” as low pass and high pass (fig. 1, subblock 14 and 16);

“encoding said lowband” as lowband encoder (Fig. 1, subblock 18)

“encoding said highband.....lowband” as LPC from periodic signals + noise from the other band (Fig. 5, and Fig. 6, subblock 120)

“combining...speech” as combining both block of speech processed data (output of Fig. 1)

As per claims 2,4, Tucker et al (6675144) teaches a method and apparatus of speech decoding (Fig. 2) comprising:

“decoding a first portion.....signal” as narrowband decoder (Fig. 2, subblock 30)

“decoding a second portion.....preceding step” as white noise plus noise energy modulated signal (Fig. 2)

“combining....signal” as the decoded output (output of Fig. 2)

As per claims 1-4, Tucker et al (6675144) teaches white noise excitation (fig. 2 and col. 6 lines 49-57), however, does not explicitly teach the modulation of the information to be used in the higher band. Liljeryd et al (6925116), however, teaches using linked lowband/highband information to be extrapolated to the alternate band (Liljeryd et al (6925116), col. 2 line 63 – col. 3 line 4; col. 15 lines 48-65; col. 15 lines 25-43).

Therefore, it would have been obvious to one of ordinary skill in the art of codecs to modify the teachings of Tucker et al (6675144) with lowband noise modulated signals influencing highband signals because it would advantageously improve bitrate reduction (Liljeryd et al (6925116), col. 2 lines 52-63).

As per claim 5, the combination of Tucker et al (6675144) in view of Liljeryd et al (6925116) teaches:

Art Unit: 2655

“decimating....highband” as decimating thru the filters (Tucker et al (6675144) ,col. 6 lines 20-26)

“encoding.....quantization” as encoding thru the narrowband encoder (Tucker et al (6675144) ,Fig. 1, subblock 18)

“reversing.....step” as subtracting adjacent spectral components (Tucker et al (6675144) ,col. 6 lines 38-50)

“encoding.....quantization” as differential encoding (Tucker et al (6675144) ,col. 6 lines 44-46)

As per claims 6,8, the combination of Tucker et al (6675144) in view of Liljeryd et al (6925116) teaches decoding both the first and second portions using LPC coefficients (Tucker et al (6675144) ,Fig. 10, col. 9 line 45 – col. 10 line 8, which is in the form of a codebook, which is well known in the art)

As per claim 7, the combination of Tucker et al (6675144) in view of Liljeryd et al (6925116) teaches both encoders using a quantizer (Tucker et al (6675144) ,Fig. 11, subblock 152)

### ***Response to Arguments***

4. Applicant's arguments filed 10/24/2005 have been fully considered but are moot in view of the new grounds of rejection.

Art Unit: 2655

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno  
1/05/06

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER